

CLAIMS

1. A process for obtaining a polythiourethane polarized article comprising: positioning a polarized polyvinyl alcohol film in a molding cavity of a two part mold assembly; pouring in the molding cavity a polymerizable composition comprising:

- (a) at least one poly(iso)thiocyanate monomer and at least one polythiol; or
(b) a mixture of at least one liquid NCO- or NCS-terminated poly(thio)urethane prepolymer and at least one liquid SH-terminated poly(thio)urethane prepolymer; curing the polymerizable composition; and removing the polythiourethane polarized article from the molding cavity.

2. The process of claim 1, where the polymerizable composition is free of NH_2 functionalities.

3. The process of claim 1, where the two part mold assembly comprises two mold parts spaced apart by a peripheral gasket, where the gasket includes means for positioning and maintaining the polarized polyvinyl alcohol film in a predetermined position.

4. The process of claim 3, where the means comprises an annular recess in which the periphery of the polyvinyl alcohol film is inserted.

5. The process of claim 1, where the polarized polyvinyl alcohol film is a single layer of polyvinyl alcohol.

6. The process of claim 1, where the polarized polyvinyl alcohol film has been dried at a temperature ranging from 25°C to 100°C before pouring the polymerizable composition in the molding cavity.

7. The process of claim 6, where the polarized polyvinyl alcohol film has been dried at a temperature ranging from 45°C to 60°C before pouring the polymerizable composition in the molding cavity.

8. The process of claim 1 wherein the polymerizable composition is cured from 10°C to 120°C.

9. A process for obtaining a polarized article comprising: positioning a polarized polyvinyl alcohol film in a molding cavity of a two part mold assembly; pouring in the molding cavity a polymerizable composition comprising:

- 5 (a) at least one poly(iso)thiocyanate monomer and at least one polythiol; or
(b) a mixture of at least one liquid NCO- or NCS-terminated poly(thio)urethane prepolymer and at least one liquid SH-terminated poly(thio)urethane prepolymer; and curing the polymerizable composition to yield the polarized article, where the polarized
10 polyvinyl alcohol film adheres to the cured polymerizable composition.

10. The process of claim 9, where the polymerizable composition is free of NH_2 functionalities.

11. The process of claim 9, where the two part mold assembly comprises
15 two mold parts spaced apart by a peripheral gasket.

12. The process of claim 11, where the peripheral gasket includes an annular recess in which the periphery of the polyvinyl alcohol film is inserted.

13. The process of claim 9, where the polarized polyvinyl alcohol film is a single layer of polyvinyl alcohol.

20 14. The process of claim 9, where the polarized polyvinyl alcohol film has been dried at a temperature ranging from 25°C to 100°C before pouring the polymerizable composition in the molding cavity.

25 15. The process of claim 14, where the polarized polyvinyl alcohol film has been dried at a temperature ranging from 45°C to 60°C before pouring the polymerizable composition in the molding cavity.

16. The process of claim 9, where the polymerizable composition is cured from 10°C to 120°C.

17. An article comprising polythiourethane and a naked polyvinyl alcohol film directly adhering to said polythiourethane.

30 18. The article of claim 17, where the naked polyvinyl alcohol film is embedded between two layers of polythiourethane.

19. The article of claim 17, further defined as an optical lens.